

New Aircraft Design and Certification

General Aviation Safety: Climbing to the Next Level

Presented at: NTSB GA Safety Forum

By: Earl Lawrence
FAA Small Airplane Directorate

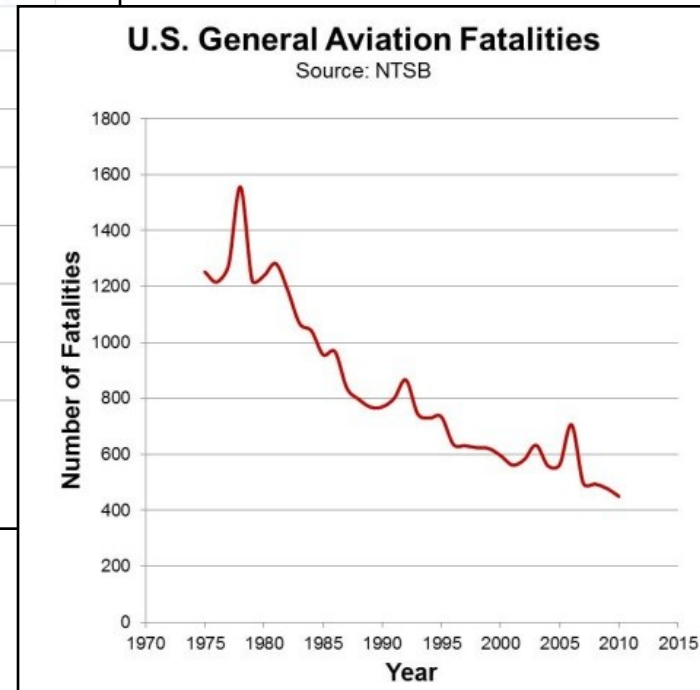
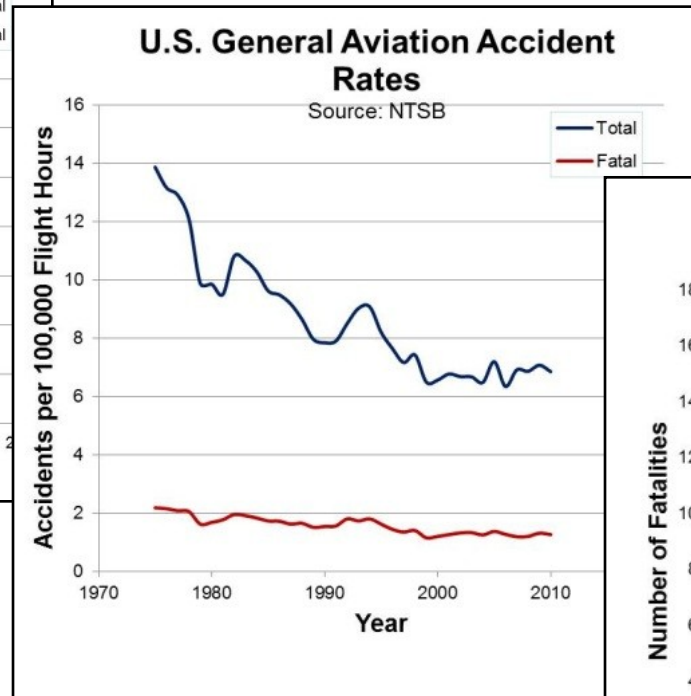
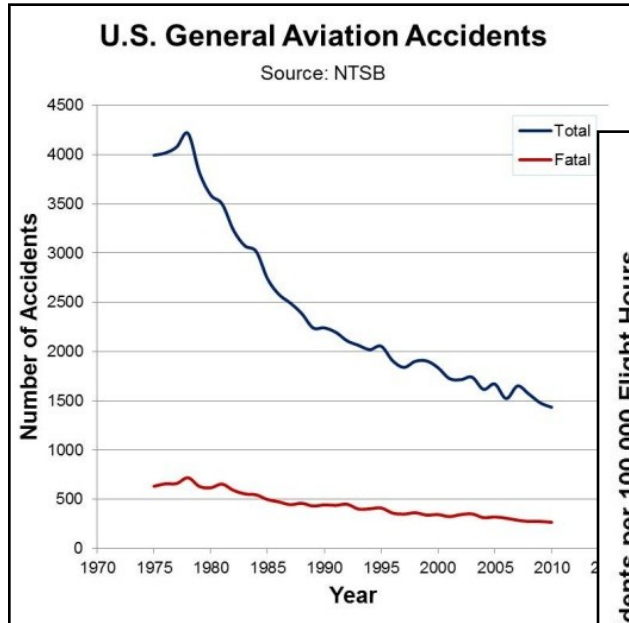
Date: June 19-20, 2012



Federal Aviation
Administration



Current Regulations Have Served Us Well

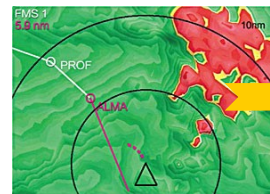


Climbing to the Next Level of Safety

Effect of Innovation on Standards

- Requirements delineated by aircraft weight & engine type no longer reflect today's aircraft
- GA is a diverse mix of aircraft & operations
- Part 23 can not be updated rapidly (by design)

Appropriate standards and means of compliance are applied, but requires many issue papers & special conditions



Part 23 ARC Objectives

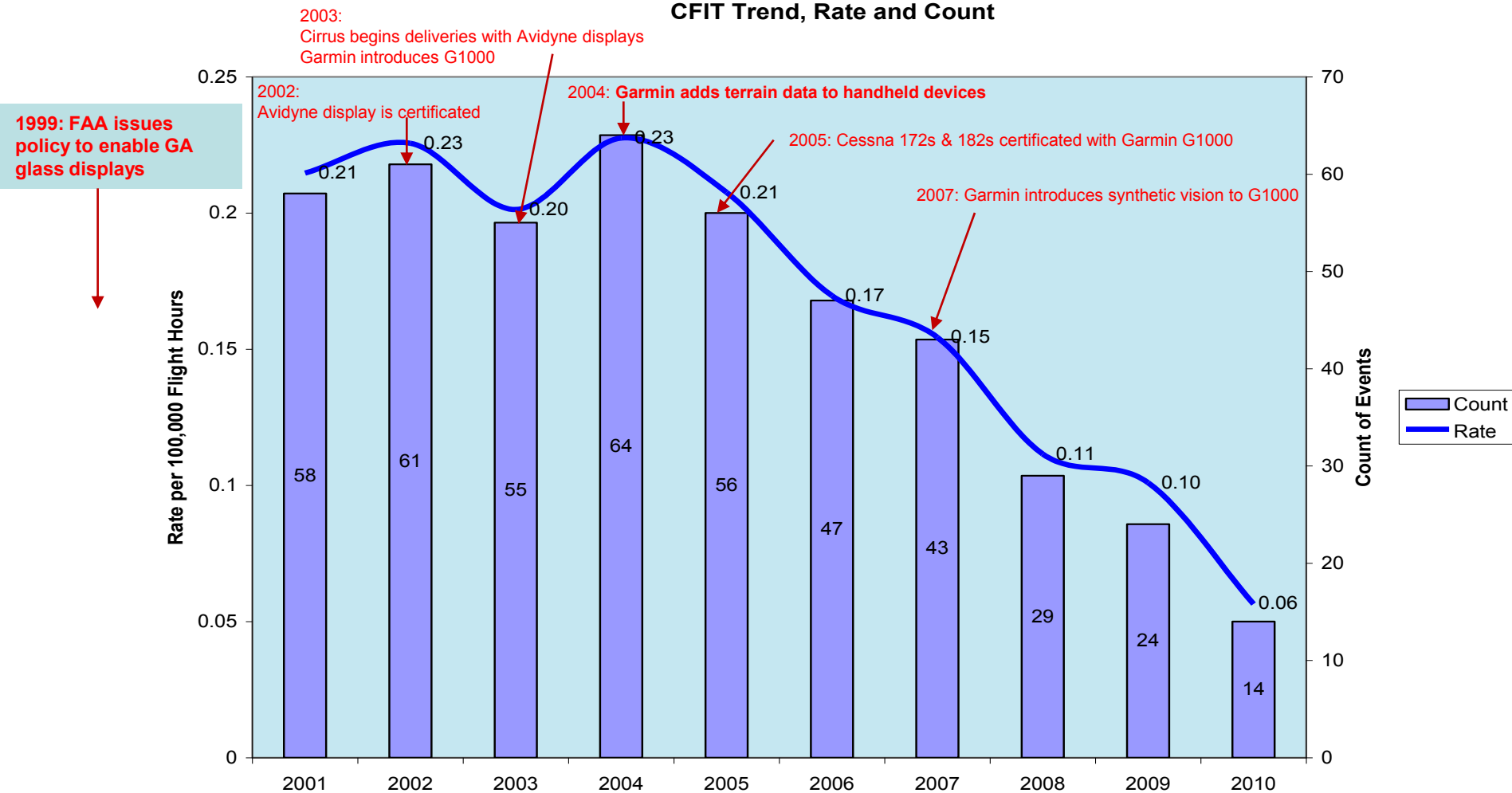
- Targeting 50% reductions in certification costs and fatal accidents

GAJSC GA Accident Rate CY2001 – CY2010, CFIT

Source: NTSB Aviation Accident/Incident Database. FAA GA Survey Data 2001 – 2010.

Note: 66% of fatal accidents have been finalized for 2010.

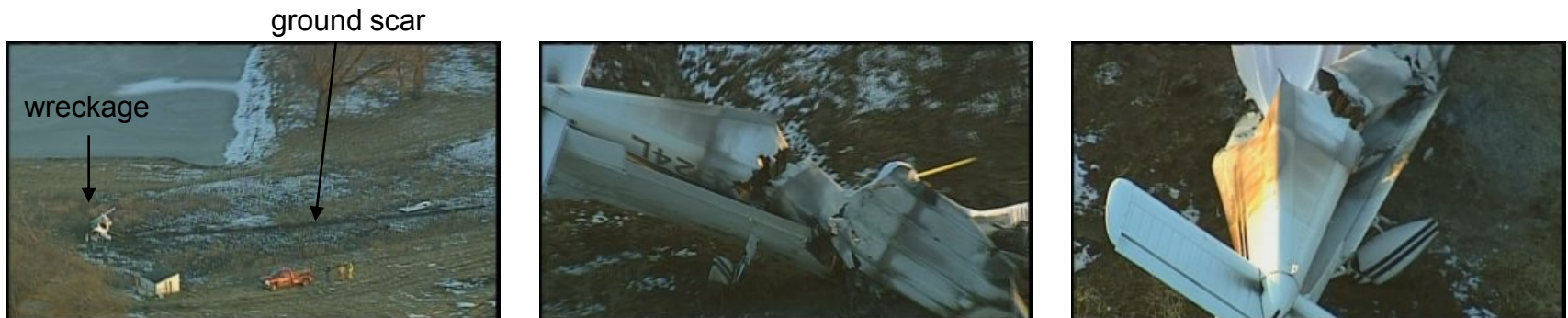
CFIT Trend, Rate and Count



Small Airplane Directorate

Key Focus Areas

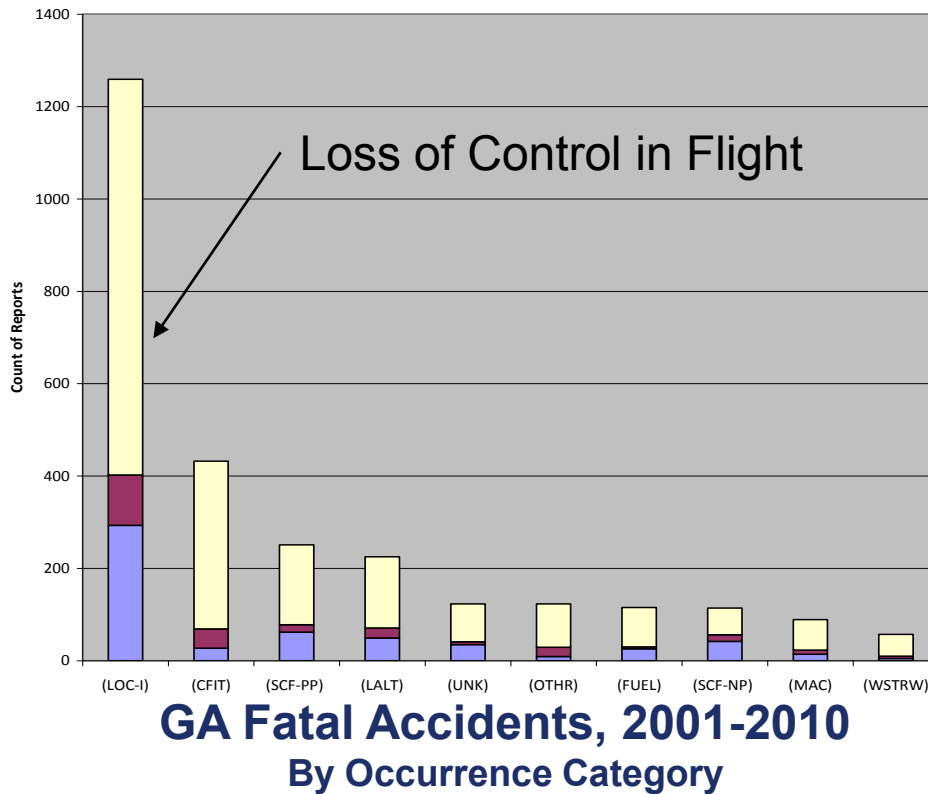
- Reduce Loss-of-Control Accidents
- Improve Occupant Survivability



Photos: KCTV5 News

Loss of Control

The Problem...



What We're Doing...

Aircraft

- AOA indicators
- Aerodynamics

Automation

- Envelope protection
- “Easy button” auto land

Weather

- Improved icing predictions
- Increased data availability

GAJSC

- Loss of Control work group



Survivability

The Problem...

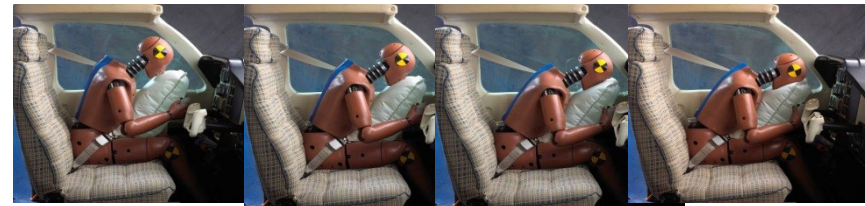
Over 400 fatalities a year



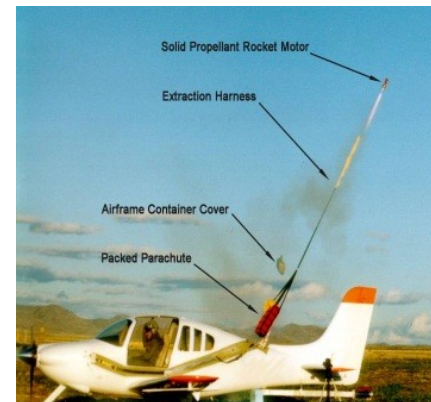
Photo credit: Robert Peebles, Jr.

What We're Doing...

Inflatable Restraints



Ballistic Recovery Devices



Questions?



Discussion?